

REMARKS

This Amendment is responsive to the Office Action mailed October 14, 2005.

Applicant respectfully requests reconsideration of the application, as amended.

Office Action Summary

Claims 47-69 have been rejected under 35 USC 102(e) as being anticipated by US Patent No. 6,175,917 of Arrow et al. ("Arrow").

Status of Claims

Claims 47-69 are pending in the application. In the present response, claims 47, 51, 52, 55-57, 60, 61, 65, 66 and 69 have been amended. No new matter has been added.

Applicant reserves all rights with respect to the applicability of the doctrine of equivalents.

Rejections Under 35 U.S.C. § 102(e)

Claims 47-51

Claim 47 has been rejected under 35 USC 102(e) as being anticipated by Arrow.

Without conceding the merits of the rejection, applicant submits that claim 47, as amended, is not anticipated by Arrow. As amended, claim 47 recites:

A method for secure in-band management of a network device that provides routing and forwarding services, the method comprising:
 configuring a virtual private network (VPN) for the network device;
 linking the VPN to a source of non-VPN management commands;
 using the VPN to carry the non-VPN management commands from the source of the non-VPN management commands to the network device; and
 using the network device to forward the non-VPN management commands to a management port of the network device through a VPN module.

In particular, claim 47 recites “using [a] VPN to carry . . . **non-VPN** management commands from [a] source of the non-VPN management commands to [a] network device.”

Arrow discloses a method where a VPN management station uses a VPN to carry VPN management and configuration commands from the VPN management station to VPN units. “VPN management station 160 controls VPN units 115, 125 and 135 through commands and configuration information transmitted to the respective VPN unit through the public network 100.” (Arrow, col. 6, lines 31-34; Fig. 1). Arrow’s VPN management station manages VPN units and only VPN units. Therefore, Arrow does not disclose “using [a] VPN to carry . . . **non-VPN** management commands from [a] source of the non-VPN management commands to [a] network device,” as recited in claim 47. Applicant submits, therefore, that claim 47, as amended, is not anticipated by Arrow.

Given that claims 48-51 depend from claim 47, and include all of the limitations of claim 47, applicant submits that claims 48-51 are not anticipated by Arrow.

Claims 52-55

Claim 52 has been rejected under 35 USC 102(e) as being anticipated by Arrow. Without conceding the merits of the rejection, applicant submits that claim 52, as amended, is not anticipated by Arrow. As amended, claim 52 recites:

A network device that provides routing and forwarding services for a data network, the network device comprising:
a routing and forwarding module to forward data received from the data network on an input data link to an output data link in accordance with source and destination information contained in the data;
a router configuration module to perform non-VPN management operations for the network device;

a management port coupled to the router configuration module to receive the non-VPN management commands for the router configuration module; and

a management VPN module coupled to the routing and forwarding module and to the management port, the management VPN module to provide non-VPN management commands to the management port from a virtual private network (VPN), wherein the non-VPN management commands are delivered to the routing and forwarding module.

In particular, claim 52 recites “a management VPN module coupled to the routing and forwarding module and to the management port, the management VPN module to provide non-VPN management commands to the management port from a virtual private network (VPN), wherein the non-VPN management commands are delivered to the routing and forwarding module.”

Arrow discloses network devices that are either VPN units or include VPN units, where the VPN units receive VPN management commands from a VPN management station. “VPN management station 160 controls VPN units 115, 125 and 135 through commands and configuration information transmitted to the respective VPN unit through the public network 100.” (Arrow, col. 6, lines 31-34; Fig. 1). As discussed above, Arrow’s VPN management station manages VPN units and only VPN units. Therefore, Arrow does not disclose “[a] management VPN module to provide non-VPN management commands to [a] management port from a virtual private network (VPN), wherein the non-VPN management commands are delivered to the routing and forwarding module,” as recited in amended claim 52. Applicant submits, therefore, that claim 47, as amended, is not anticipated by Arrow.

Gien that claims 53-55 depend from claim 52, and include all of the limitations of claim 52, applicant submits that claims 53-55 are not anticipated by Arrow.

Claims 56-60

Claim 56 has been rejected under 35 USC 102(e) as being anticipated by Arrow.

Without conceding the merits of the rejection, applicant submits that claim 56, as amended, is not anticipated by Arrow. As amended, claim 56 recites:

A network device that provides routing and forwarding services, the network device comprising:
 means for configuring a virtual private network (VPN) for the network device;
 means for linking the VPN to a source of non-VPN management commands;
 means for using the VPN to carry the non-VPN management commands from the source of the non-VPN management commands to the network device; and
 means for using the network device to forward the non-VPN management commands to a management port of the network device through a VPN module.

In particular, claim 56 recites “means for using [a] VPN to carry . . . **non-VPN** management commands from [a] source of the non-VPN management commands to [a] network device.”

As described above, Arrow discloses a means for using a VPN to carry VPN management and configuration commands from a VPN management station to VPN units. “VPN management station 160 controls VPN units 115, 125 and 135 through commands and configuration information transmitted to the respective VPN unit through the public network 100.” (Arrow, col. 6, lines 31-34; Fig. 1). Arrow’s VPN management station manages VPN units and only VPN units. Therefore, Arrow does not disclose “means for using [a] VPN to carry . . . **non-VPN** management commands from [a] source of the non-VPN management commands to [a] network device,” as recited in claim 56. Applicant submits, therefore, that claim 56, as amended, is not anticipated by Arrow.

Given that claims 57-60 depend from claim 56, and include all of the limitations of claim 56, applicant submits that claims 57-60 are not anticipated by Arrow.

Claims 61-65

Claim 61 has been rejected under 35 USC 102(e) as being anticipated by Arrow.

Without conceding the merits of the rejection, applicant submits that claim 61, as amended, is not anticipated by Arrow. As amended, claim 61 recites:

A machine-readable medium providing instructions, which if executed by a processor, cause the processor to perform an operation comprising:
 configuring a virtual private network (VPN) for a network device;
 linking the VPN to a source of non-VPN management commands;
 using the VPN to carry the non-VPN management commands from the source of the non-VPN management commands to the network device; and
 using the network device to forward the non-VPN management commands to a management port of the network device through a VPN module.

In particular, claim 61 recites “using [a] VPN to carry . . . **non-VPN** management commands from [a] source of the non-VPN management commands to [a] network device.”

Arrow discloses a method of operating a computer system, which causes the computer system to perform operations comprising using a VPN to carry VPN management and configuration commands from a VPN management station to VPN units. “VPN management station 160 controls VPN units 115, 125 and 135 through commands and configuration information transmitted to the respective VPN unit through the public network 100.” (Arrow, col. 6, lines 31-34; Fig. 1). As discussed above, Arrow’s VPN management station manages VPN units and only VPN units. Therefore, Arrow does not disclose “using [a] VPN to carry . . . **non-VPN** management commands from [a] source

of the non-VPN management commands to [a] network device,” as recited in claim 61. Applicant submits, therefore, that claim 61, as amended, is not anticipated by Arrow.

Given that claims 62-65 depend from claim 61, and include all of the limitations of claim 61, applicant submits that claims 62-65 are not anticipated by Arrow.

Claims 66-69

Claim 66 has been rejected under 35 USC 102(e) as being anticipated by Arrow.

Without conceding the merits of the rejection, applicant submits that claim 66, as amended, is not anticipated by Arrow. As amended, claim 66 recites:

A data network comprising:
a plurality of network devices that provide routing and forwarding services for the data network; and
a source of non-VPN management commands transmitted to the plurality of network devices using a virtual private network (VPN), wherein each of the plurality of network devices includes:
a routing and forwarding module to forward data received from the data network on an input data link to an output data link in accordance with source and destination information contained in the data;
a router configuration module to perform non-VPN management operations for the network device;
a management port coupled to the router configuration module to receive non-VPN management commands for the router configuration module; and
a management VPN module coupled to the routing and forwarding module and to the management port, the management VPN module to provide non-VPN management commands to the management port from the source of the non-VPN management commands.

In particular, claim 66 recites “a management VPN module coupled to the routing and forwarding module and to the management port, the management VPN module to provide non-VPN management commands to the management port from the source of the non-VPN management commands.”

Arrow discloses a data network that includes devices that are either VPN units or include VPN units, where the VPN units receive VPN management commands from a VPN management station. “VPN management station 160 controls VPN units 115, 125 and 135 through commands and configuration information transmitted to the respective VPN unit through the public network 100.” (Arrow, col. 6, lines 31-34; Fig. 1). As discussed above, Arrow’s VPN management station manages VPN units and only VPN units. Therefore, Arrow does not disclose “a management VPN module coupled to the routing and forwarding module and to the management port, the management VPN module to provide non-VPN management commands to the management port from the source of the non-VPN management commands,” as recited in amended claim 66. Applicant submits, therefore, that claim 66, as amended, is not anticipated by Arrow.

Given that claims 67-69 depend from claim 66, and include all of the limitations of claim 66, applicant submits that claims 67-69 are not anticipated by Arrow.

Conclusion

Applicant respectfully submits that in view of the amendments and arguments set forth herein, the applicable rejections have been overcome.


If the Examiner believes a telephone interview would expedite the prosecution of this application, the Examiner is invited to contact Richard Thill at (408) 720-8300.

If there are any additional charges, please charge our Deposit Account No. 02-2666.

Respectfully submitted,

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